

# 2

## LESSON

# Understanding Operating System Configurations

### EXAM OBJECTIVE MATRIX

SKILLS/CONCEPTS	MTA EXAM OBJECTIVE DESCRIPTION	MTA EXAM OBJECTIVE NUMBER
Understanding User Accounts and User Account Control (UAC)	Understand user account control (UAC).	3.2
Configuring Control Panel Options	Configure Control Panel options.	1.1
Configuring Desktop Settings	Configure desktop settings.	1.2
Understanding Virtualized Clients	Understand virtualized clients.	2.4
Understanding Application Virtualization	Understand application virtualization.	3.5

### KEY TERMS

**accessibility options**

**Administrative Tools**

**Administrator account**

**Aero**

**Aero Peek**

**Aero Shake**

**Aero Snap**

**application virtualization**

**authentication**

**cached credentials**

**color depth**

**Control Panel**

**desktop settings**

**display settings**

**Ease of Access Center**

**elevated permissions**

**font size**

**gadget**

**Guest account**

**guest operating system (guest OS)**

**Jump List**

**live preview**

**Microsoft Enterprise Desktop Virtualization (Med-V or MED-V)**

**Microsoft Management Console (MMC) snap-ins**

**permissions**

<b>pin</b>	<b>user profile</b>
<b>Quick Start definitions</b>	<b>virtualization</b>
<b>resolution</b>	<b>virtual computer</b>
<b>shortcuts</b>	<b>virtual desktop infrastructure (VDI)</b>
<b>Standard user account</b>	<b>virtual machine (VM)</b>
<b>user account</b>	<b>virtualized client</b>
<b>User Account Control (UAC)</b>	<b>Windows XP Mode</b>

As an IT technician at Interstate Snacks, you're responsible for setting up new computers and helping users adjust their existing computer settings. Your duties include creating user accounts, optimizing display settings, creating shortcuts, and so on. In addition, because your company uses a legacy program that doesn't run in Windows 7, some of your employees need an alternative way to access the program. So, you plan to show those employees how to use Windows XP Mode.

## ■ Understanding User Accounts and User Account Control (UAC)



### THE BOTTOM LINE

Microsoft introduced the security feature User Account Control (UAC) in Windows Vista and improved the feature in Windows 7. UAC constantly monitors activity on your computer and notifies you when changes are about to be made that affect your computer's security or that affect other user accounts on the computer.

A **user account** is a collection of information that defines the actions that can be taken on a computer and which files and folders can be accessed (rights, policies, and **permissions**). An account also keeps track of user preferences, such as the desktop background, window color, and screen saver. Several users can share a computer and each user should have her own account. With separate accounts, each user can personalize her desktop, keep her files and settings protected from other users, and so on.

There are three types of user accounts in Windows 7:

- Administrator
- Standard user
- Guest

Each account has a different level of control over the computer.

## Understanding Standard User Accounts and Administrative User Accounts

The two most commonly used account types in Windows 7 are Standard user and Administrator. A standard account is generally used for everyday tasks, and an administrative-level account is used for troubleshooting, installation, and similar tasks that require more rights and permissions.

**CERTIFICATION READY**

What are the differences between standard user accounts and administrative user accounts?

3.2

The **Guest account** type is simply an account with few permissions and no password that allows a user to use a computer without requiring a unique user account. The Guest account is intended mainly for a user who needs temporary use of a computer, and is disabled by default.

The **Standard user account** type has fewer permissions than an administrative-level account but enough permissions to be productive. You should use a standard account for day-to-day work. When you're logged on as a standard user, you can surf the Web, read e-mail, create documents, and listen to music, as well as perform other rather basic tasks.

The **Administrator account** type provides the broadest permissions and therefore the most control over the computer. This includes changing all settings, installing programs, and modifying the Windows registry. Use an administrative-level account only when you need to make changes or perform maintenance that requires elevated permissions. (**Elevated permissions** generally refer to administrative-level permissions.) Using an administrative account for ordinary (Standard-level) computing tasks leaves the computer at a much greater risk of attack. For example, if you visit a malicious Web site by accident, the site can easily install and execute a Trojan horse program on the computer because of the broad permissions of the administrative account.

A computer administrator can use a Standard user account for most tasks and use the Run as administrator command to start certain tasks or programs with full administrator-level permissions. For example, let's say you want to run a program but get an Access denied error message. Depending on the program, you might be able to right-click the program's menu item or icon and then select Run as administrator from the shortcut menu. The program will run with full administrator rights. Before running any tasks or programs with elevated privileges, make sure the computer is protected by a firewall and up-to-date antivirus program or that it's disconnected from the Internet.

There's another, special account to be aware of: the default Administrator account. It is the name of the default administrative-level account that's created when you install Windows. Think of it as the ultimate master local (i.e., non-domain) account in Windows. You shouldn't use this account for anything other than troubleshooting or for specific activities that you can't perform with any other account.

The default Administrator account is automatically hidden (disabled) in Windows 7, but you can enable it if necessary. You must first open a command prompt window in administrator mode by clicking the Start button, typing **cmd** in the *Search programs and files* search box, right-clicking cmd.exe in the resulting list, and then selecting *Run as administrator*. In the command prompt window that displays, type **net user administrator /active:yes** and press Enter. When you're finished using the account and want to disable it, open a command prompt window as described and type **net user administrator /active:no**.

When you create a new user account or modify an existing account, you can choose Standard or you can choose Administrator. The Guest account type does not show up as an option in the Create a New Account window.



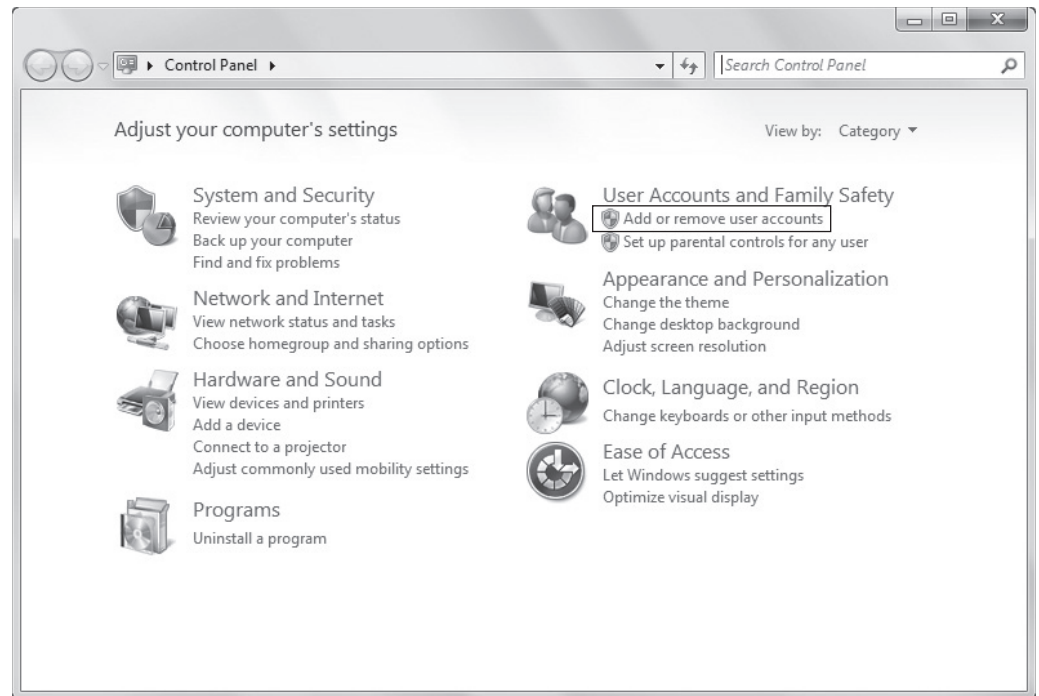
## CREATE A USER ACCOUNT

**GET READY.** To create a new user account, perform the following steps:

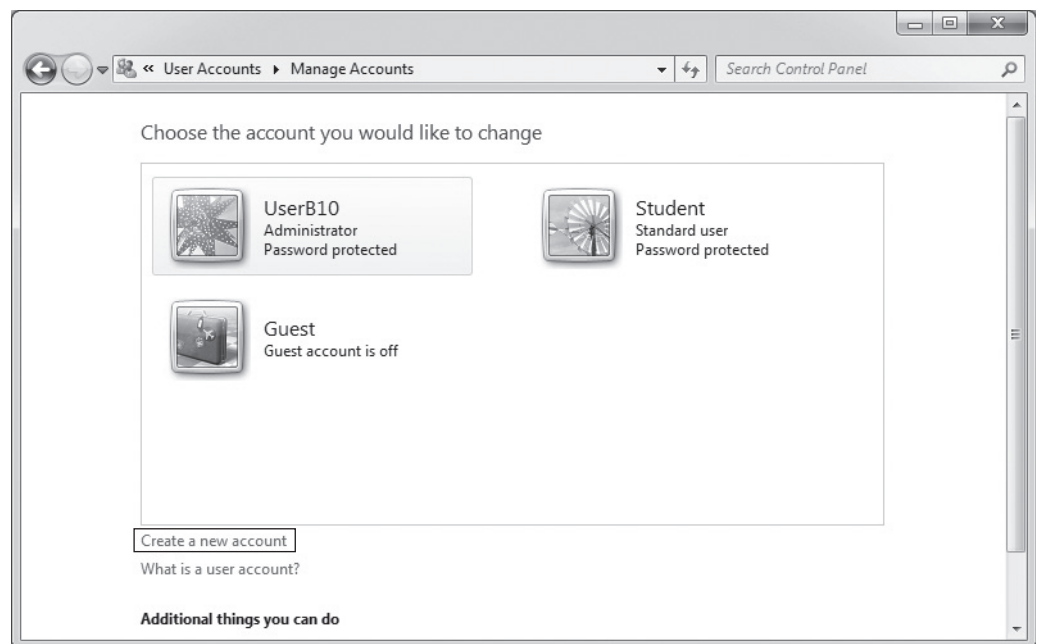
1. Click **Start** and then click **Control Panel**. In the main Control Panel window, in the User Accounts and Family Safety section, click **Add or remove user accounts** (see Figure 2-1).
2. If you're logged on as a standard user, a User Account Control dialog displays. Enter an administrator password and click **Yes**.
3. The Manage Accounts window displays (see Figure 2-2). Click **Create a new account**.

**Figure 2-1**

Selecting Add or remove user accounts in Control Panel

**Figure 2-2**

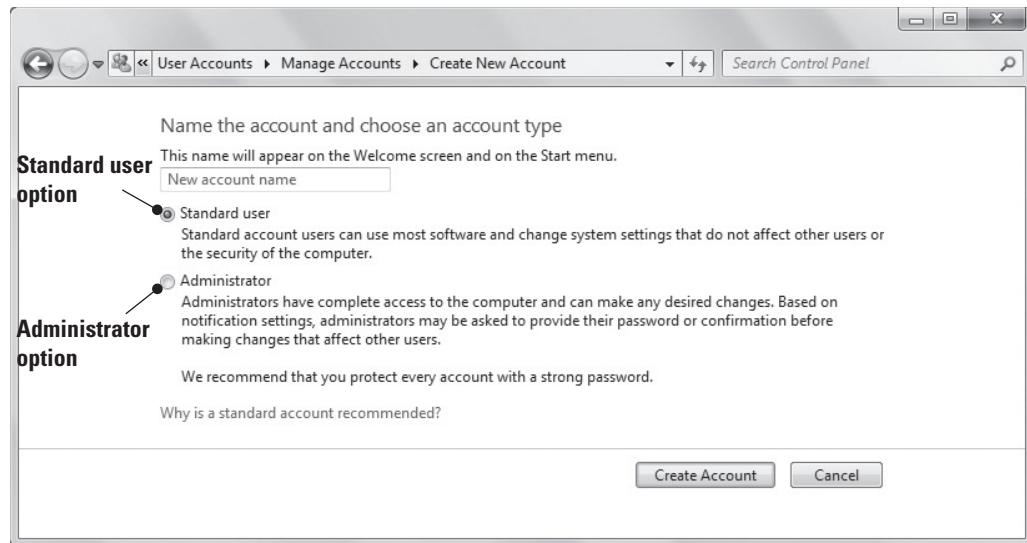
The Manage Accounts window



4. In the Create New Account window (Figure 2-3), in the **New account name** text box, type a name. Use just letters, numbers, and optionally spaces or hyphens.
5. If you want to create an administrative-level account, select **Administrator**; otherwise, leave **Standard user** selected.

**Figure 2-3**

The Create New Account window



#### 6. Click **Create Account**.

The new user displays in the Manage Accounts window. To change an account's settings, click an account name. The Change an Account screen displays and lists the following tasks:

- **Change the account name:** Edits the account's username. (This changes the name of the user's profile folder in the \Users folder. You will learn about user profiles later in the lesson.)
- **Create the password:** Creates or changes the account's password. For security purposes, it's recommended that you set a password on every user account.
- **Remove the password:** Deletes the password from this user's account.
- **Change the picture:** Selects a different picture to appear on the Start menu and the Welcome screen.
- **Set up Parental Controls:** Controls which applications and games the user can use and which days and times this user can use the computer.
- **Change the account type:** Changes the account type from Standard user to Administrator or vice versa.
- **Delete the account:** Removes the user account. You can choose to keep or delete a user account's files (such as pictures, music, documents, and so on).
- **Manage another account:** Returns to the Manage Accounts window and click another account.

## Understanding User Account Control (UAC)

User Account Control (UAC) is a security feature in Windows Vista and Windows 7 that helps protect a computer from unauthorized changes. When a user, application, or even an attacker or malicious software attempts to modify certain system settings, a dialog box displays that requires confirmation or an administrative-level password to continue.

**User Account Control (UAC)** is a feature in Windows Vista and Windows 7 that requires administrative-level permission to make changes to your computer that affect security or affect settings for other user accounts. If you're logged on as a standard user and you attempt to make a change that requires administrative-level permissions, UAC displays a dialog box. A user with an administrator account on the computer must enter his password for you to continue (see Figure 2-4). You are then temporarily given the rights of an administrator to

**Figure 2-4**

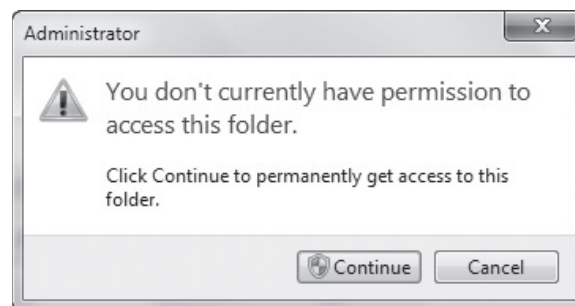
A User Account Control dialog box requesting an administrative-level password



complete the task. Once you're finished, your permissions as a standard user once again apply. If you are logged on as an administrator and the UAC dialog box appears, click Continue or Yes to continue (see Figure 2-5).

**Figure 2-5**

A User Account Control dialog box requesting permission to continue



Some of the actions that can trigger a User Account Control dialog box include the following:

- Installing and uninstalling programs
- Changing system-wide settings
- Changing UAC settings
- Adding or removing user accounts
- Changing a user's account type
- Viewing or changing another user's folders and files
- Configuring Windows Update
- Running a program as Administrator (right-clicking a program name and selecting Run as administrator)
- Installing device drivers
- Changing settings for Windows Firewall

The point of UAC is to prevent potentially damaging, unauthorized changes to a computer, whether the changes are made accidentally, by malicious software, or by hackers accessing your system.

## Understanding Types of UAC Prompts and Levels

There are four levels of UAC control. Each produces different sets of alerts or notifications to users. Any user can choose the level that works best for her, although the default settings are highly recommended.

### CERTIFICATION READY

What are the four notification levels in Windows 7?

3.2

In Windows 7, UAC has four notification levels, each of which has a different prompt (which means it displays a different dialog box). Each notification level varies slightly depending on whether you're logged on as a standard user or whether you're logged on as an administrator. The following levels pertain to an administrator account, unless noted otherwise:

- **Always notify me:** This is the most secure setting, which results in the most notifications. You are notified when programs try to install software or make changes to the computer, or when you make changes to Windows settings. (This is the default for a standard user account in Windows 7.)
- **Notify me only when programs try to make changes to my computer:** A UAC dialog box displays when installing software or making changes to system-wide computer settings, but no notification occurs when changing Windows settings. (This setting is the default for administrator Windows 7 accounts.)
- **Notify me only when programs try to make changes to my computer (do not dim my desktop):** Dimming the desktop is a visual indicator that an important change is pending. This setting does not open a UAC dialog box if you're making changes to your Windows settings. You must be logged on as an administrator to select this setting. This option is less secure but might be used by an administrator if the computer is highly secure.
- **Never notify me of installations or changes:** This is the least secure setting. You must be logged on as an administrator to select this setting. After restarting your computer, UAC is turned off. If you log on as a standard user, changes that require administrative-level permissions are denied (you are not prompted for an administrator password). This option should be used only in highly controlled and secure environments, such as test environments.

Microsoft highly recommends leaving UAC turned on for the safety and security of your computer.



### CHANGE UAC SETTINGS

**GET READY.** To modify UAC settings, perform the following steps:

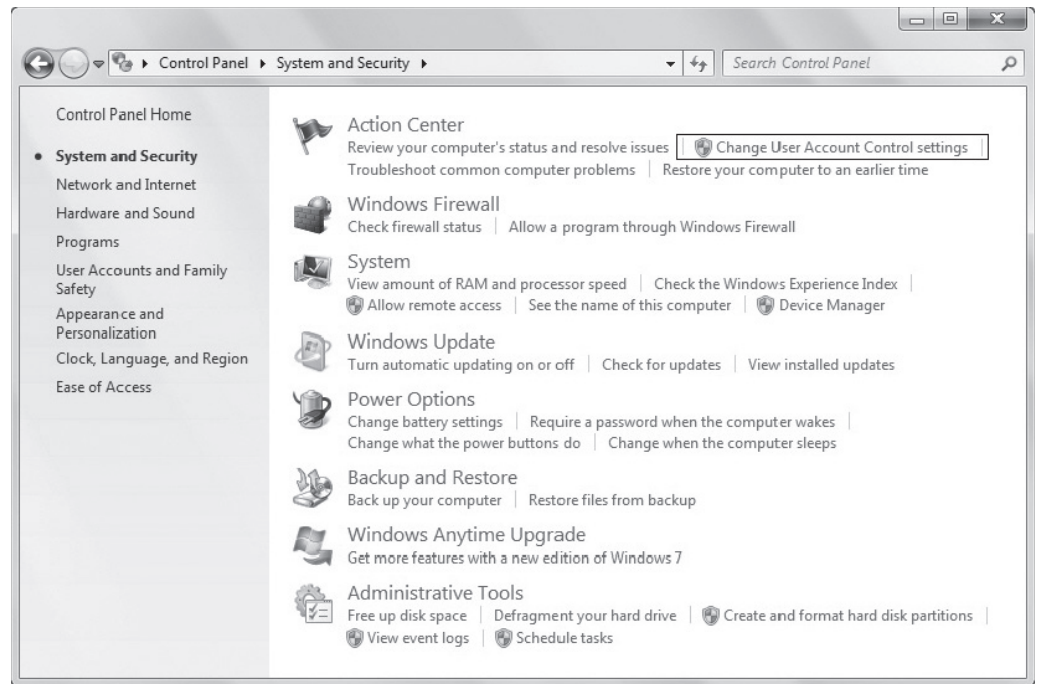
1. Click **Start > Control Panel > System and Security > Change User Account Control settings** (see Figure 2-6). (Or, click the **Action Center** icon (the flag) on the right side of the Windows taskbar along the bottom of the screen, click **Open Action Center**, and then, in the left pane, click **Change User Account Control settings**.)
2. The User Account Control Settings window displays (see Figure 2-7). Move the slider up or down to raise or lower the number of UAC notifications you receive.
3. Click **OK** to save your changes.

Although Microsoft highly recommends that you leave UAC enabled, some users choose to turn it off to avoid the UAC notifications, especially if they're performing tasks (safely) that trigger UAC prompts. To turn off UAC, move the slider to the *Never notify* position and click OK. If you're prompted for an administrator password or confirmation, type the password or provide confirmation, and then restart your computer.

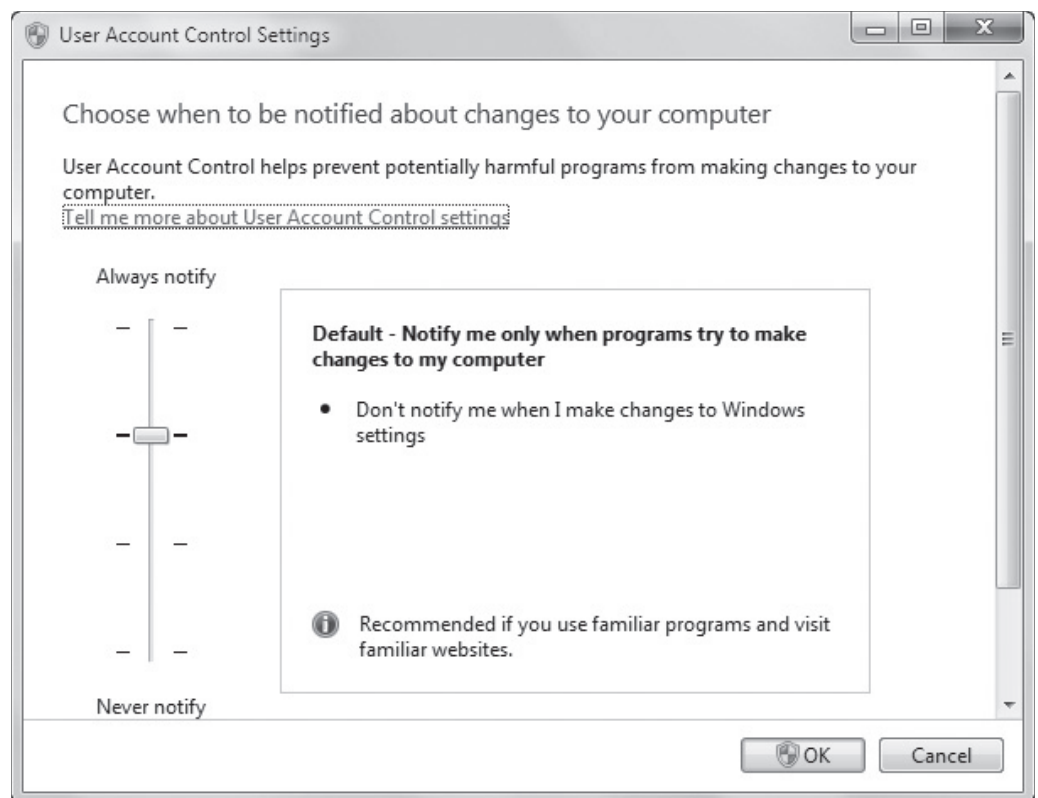


**Figure 2-6**

The System and Security window in Control Panel

**Figure 2-7**

The User Account Control Settings window



#### **+ MORE INFORMATION**

For more information about User Account Control, visit <http://windows.microsoft.com/en-US/windows7/products/features/user-account-control> or [http://technet.microsoft.com/en-us/library/cc709691\(Ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc709691(Ws.10).aspx)



## ■ Configuring Control Panel Options



### THE BOTTOM LINE

The Windows 7 Control Panel provides access to the primary tools and utilities used to manage devices, settings, and system behaviors on Windows PCs. You'll find control applets (small applications) for everything from system administration to Windows Update; you will also find specific controls for system devices, displays, and more.

You've already seen the Control Panel in action in this lesson, but you will learn more about it now. The **Control Panel** is a utility that allows you to configure operating system features, set up hardware, install and uninstall software, create and modify users, and perform system maintenance.

Each "program" in Control Panel is called an applet. Applets are organized by categories. Categories and applets are hyperlinked, so clicking a category or applet link in Control Panel opens a new window. One of Control Panel's most convenient aspects is that you can access many applets from multiple categories.

The default view in Control Panel is called Category view (see Figure 2-8). You can open the pull-down list in the upper-right corner of the Control Panel window to select two other views: Large icons and Small icons. The views are shown in Figure 2-9 and Figure 2-10, respectively. Choosing a different view can sometimes help you navigate through Control Panel applets more easily.

The preference settings you make in Control Panel applets are stored in the Windows registry. Therefore, you must have administrative-level access to modify many of the settings (such as uninstalling software and other system-wide settings) in the Control Panel.

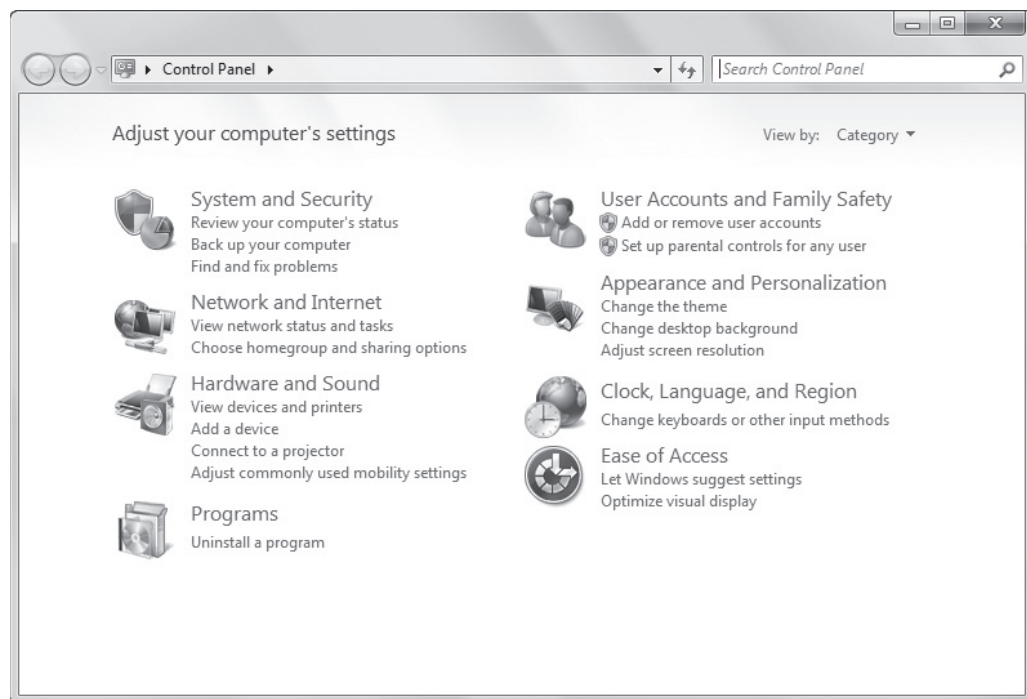
### CERTIFICATION READY

What is the purpose of Control Panel?

1.1

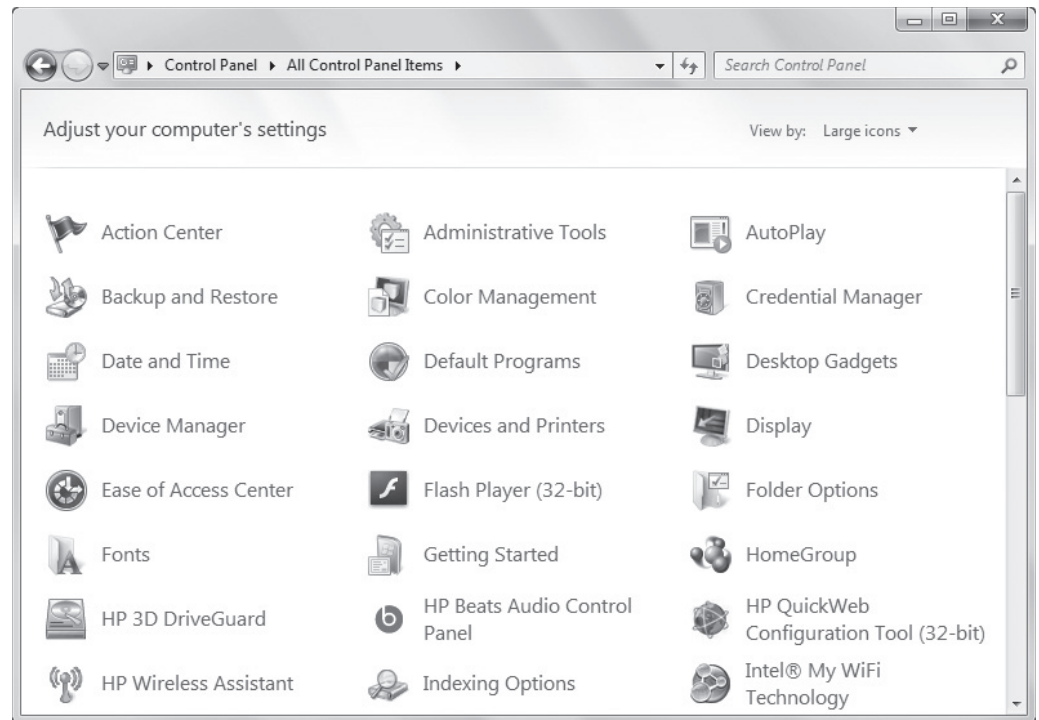
**Figure 2-8**

The Category view in the Control Panel window

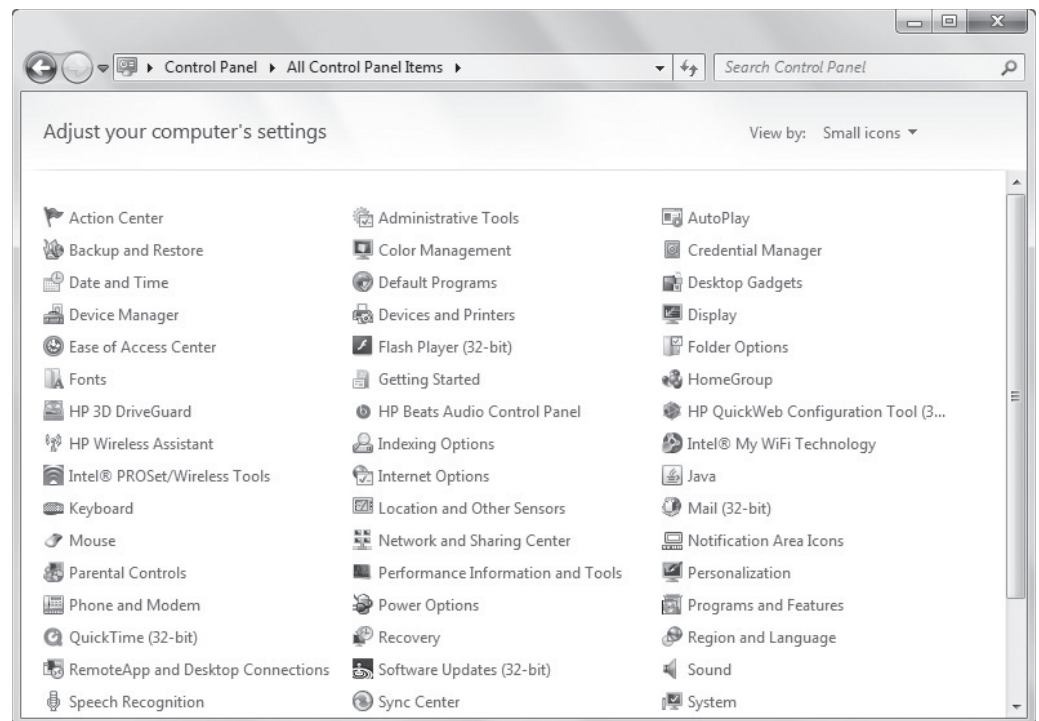


**Figure 2-9**

The Large icons view in the Control Panel window

**Figure 2-10**

The Small icons view in the Control Panel window



**Table 2-1**  
Control Panel Categories

CATEGORY	DESCRIPTION
System and Security	Provides applets for maintaining the system and configuring security. This category includes Action Center, Windows Firewall, System, Windows Update, Power Options, Backup and Restore, Windows Anytime Upgrade, and Administrative Tools. Windows 7 Ultimate and Enterprise editions also offer BitLocker Drive Encryption (if installed).
Network and Internet	Provides applets for connecting to the Internet and other networks, setting up a local network (HomeGroup), and configuring wireless settings.
Hardware and Sound	Provides applets for configuring hardware (including printers), audio settings, power options, display settings, mobile options, and more.
Programs	Provides applets for installing/uninstalling software, setting default programs, and managing desktop gadgets.
User Accounts and Family Safety	Provides applets for creating and managing user accounts, configuring parental controls, and managing Windows credentials.
Appearance and Personalization	Provides applets for changing the Windows theme, desktop background, screen saver, display settings, desktop gadgets, and taskbar and Start menu. You can also open the Ease of Access Center, change folder options, and install fonts.
Clock, Language, and Region	Provides applets for changing your computer's date and time, time zone, language, and region/location.
Ease of Access	Provides access to the Ease of Access Center, where you can configure accessibility options; also provides access to the speech recognition feature.

Table 2-1 summarizes the categories in Windows 7 Control Panel. Let's look at a few Control Panel applets in more detail.

**Configuring Administrative Tools**

Think of Administrative Tools as a well-rounded toolkit of utilities for power users and administrators. These utilities can help resolve most computer problems you may encounter and keep your system running optimally.

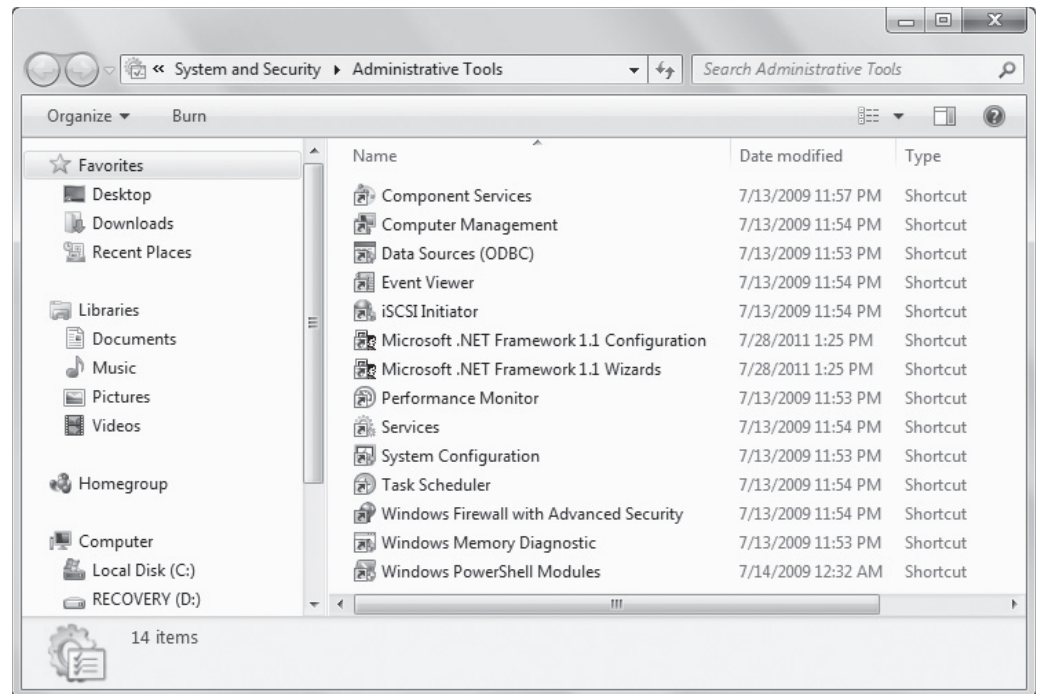
**CERTIFICATION READY**  
What are Administrative Tools?  
1.1

*Administrative Tools* is a set of utilities for managing advanced Windows features and diagnosing system problems. You can access the tools from the System and Security category of Control Panel. You can also click Start, type **admin tools** in the *Search programs and files* search box, and then select Administrative Tools from the resulting list. Figure 2-11 shows the Administrative Tools window on a Windows 7 Home Premium system. Windows 7 Professional, Ultimate, and Enterprise editions include the Local Security Policy and Print Management tools as well.

Within Administrative Tools, you can defragment your hard disk, monitor system performance, start and stop services, determine which programs run when Windows starts, and much more. Table 2-2 summarizes the tools.

**Figure 2-11**

The Administrative Tools window in Windows 7 Home Premium

**Table 2-2**

Administrative Tools Utilities

CATEGORY	DESCRIPTION
Component Services	Used mainly by software developers; allows you to manage COM+/-DCOM objects.
Computer Management	Allows you to manage local or remote computers by configuring hard disks and their partitions, monitoring system events, and managing system performance.
Data Sources (ODBC)	Used mainly by program developers and network database integrators, allows you to use ODBC to move data from one type of database to another.
Event Viewer	Allows you to view computer event information, such as program starting and stopping (including program crashes), security problems, and more.
iSCSI Initiator	Allows your computer to connect to network-attached storage.
Microsoft .NET Framework 1.1 Configuration/Wizards	Allows you to configure assemblies, services, and code access security policies related to .NET Framework. The Wizards tool gives you one-click access to configuration wizards.
Performance Monitor	Allows you to view and track system performance.
Services	Allows you to manage software and hardware services that work in the background.
System Configuration	Allows you to manage programs that run when Windows starts or when you log on.
Task Scheduler	Allows you to schedule programs and other tasks to run at certain times, automatically.
Windows Firewall with Advanced Security	Allows you to configure the built-in Windows Firewall.
Windows PowerShell Modules	Allows you to open a Windows PowerShell window and runs diagnostics.

Many of the tools listed in Table 2-2 are **Microsoft Management Console (MMC) snap-ins**. An MMC snap-in is a utility provided by Microsoft or a third party that's accessible through a common interface such as Administrative Tools. You can also access MMC by typing **MMC** in the *Search programs and files* search box.

**TAKE NOTE \***

To show Administrative Tools in the Start menu, right-click the Start button, click Properties, and then click Customize. Scroll down the list and select *Display on the All Programs menu* (under the System administrative tools heading).

**+ MORE INFORMATION**

For more information about Administrative Tools, visit <http://windows.microsoft.com/en-US/windows-vista/What-are-Administrative-Tools>

## Configuring Accessibility Options

Microsoft has built many features into Windows 7 that work with assistive technologies or as stand-alone features that make the user experience better for the visually and hearing impaired. Most features can be configured in the Ease of Access Center.

**CERTIFICATION READY**

What is the primary purpose of Windows 7's accessibility options?

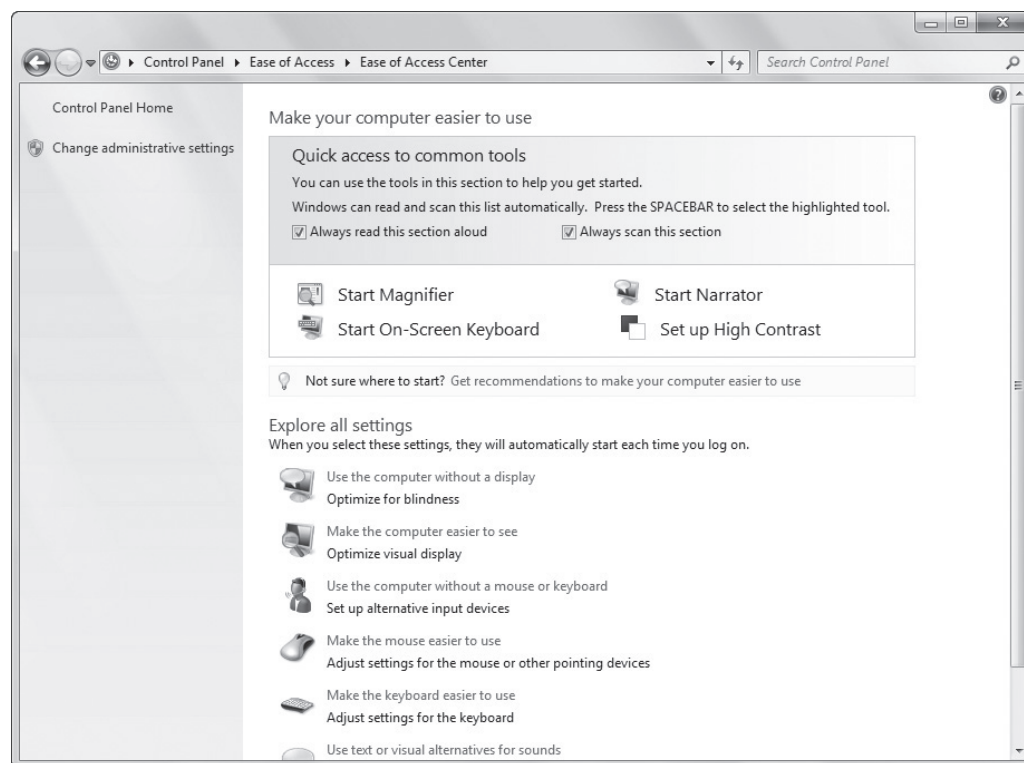
1.1

The **Ease of Access Center** (see Figure 2-12) provides many **accessibility options**, which help visually and hearing impaired users use Windows more easily and efficiently. The primary tools include Magnifier, Narrator, On-Screen Keyboard, and High Contrast.

Magnifier helps visually impaired users see a selected portion of the screen or the entire screen more clearly by increasing the size of text and graphics. The Magnifier application window

**Figure 2-12**

The Ease of Access Center tools



is quite small and provides you with access to Magnifier settings. Here you can set a certain magnification level and choose how the magnification “lens” follows the mouse pointer and text cursor. The lens looks like a magnifying glass icon on the screen.

Narrator is a text-to-speech program that reads aloud the actions you take, such as clicking and typing. This feature can also narrate certain events, such as error messages.

On-Screen Keyboard (see Figure 2-13) presents a keyboard on your screen from which you can type and enter data (rather than using a keyboard). You can use a mouse, stylus, or another pointing device to “press” keys.

**Figure 2-13**

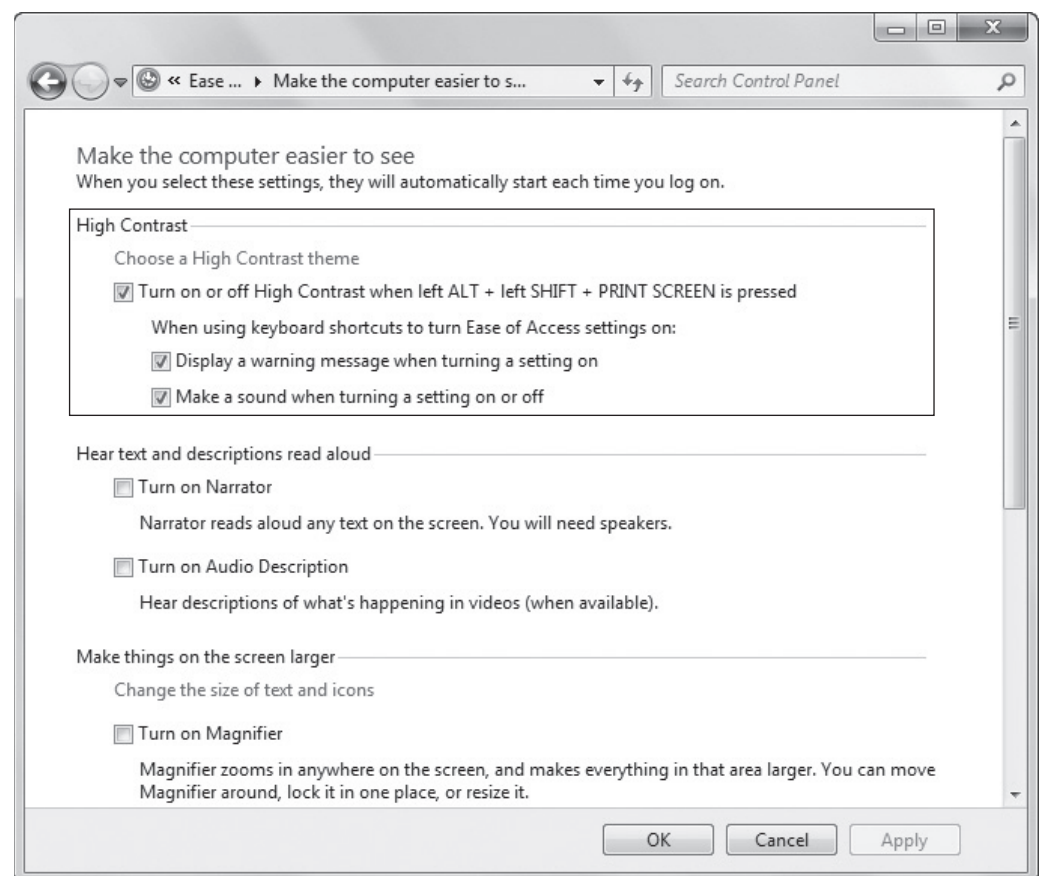
The On-Screen Keyboard presents a fully functional keyboard



Another accessibility feature is the High Contrast theme (see Figure 2-14), a color scheme that makes some text easier to read and some images easier to identify on-screen.

**Figure 2-14**

The High Contrast settings





The bottom portion of the Ease of Access Center window includes other accessibility options you can configure for visually or hearing impaired users, including:

- Using the computer without a display
- Making the computer easier to see
- Using the computer without a mouse or keyboard
- Making the mouse easier to use
- Making the keyboard easier to use
- Using text or visual alternatives for sounds
- Making it easier to focus on tasks

Speech Recognition is an accessibility feature that you access in the Ease of Access category in Control Panel. This tool allows a user to speak commands into a microphone, which Windows then processes. All speech recognition programs require a sometimes lengthy training period in which the user “teaches” the computer to recognize the user’s voice. You can learn more about the Windows Speech Recognition feature in Help and Support (click the Start button, click Help and Support, type **speech recognition** in the search box, and then press Enter).

#### MORE INFORMATION

For more information about accessibility options and the Ease of Access Center, visit <http://windows.microsoft.com/en-US/windows7/introducing-accessibility-in-windows> or <http://www.microsoft.com/enable/training/windowsvista/ea.aspx>



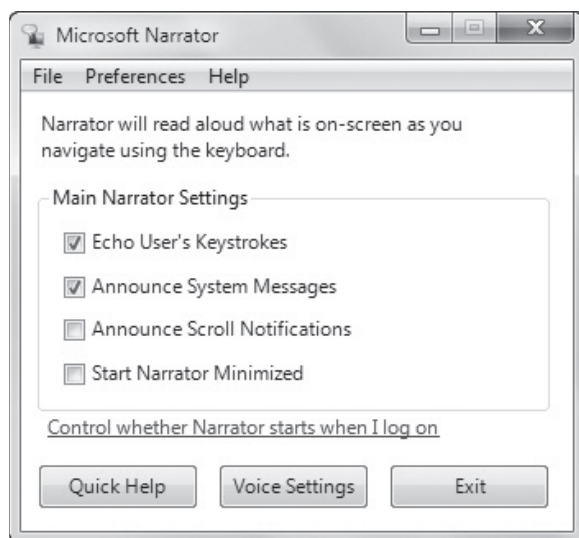
#### USE ACCESSIBILITY FEATURES

**GET READY.** To enable accessibility features, open the Ease of Access Center in Control Panel and then perform the following steps:

1. To use Magnifier, click **Start Magnifier**. When the application name displays, click it. A small application window displays a magnifier glass icon. Select the level of magnification in the window and then move the magnifier glass icon around the screen.
2. To use Narrator, click **Start Narrator**. The Microsoft Narrator dialog box displays (see Figure 2-15). Now when you type text or navigate text on the screen, Narrator reads it aloud. To turn Narrator off, click **Exit** in the Microsoft Narrator and then click **OK**.

**Figure 2-15**

The Microsoft Narrator dialog box



The steps are similar for On-Screen Keyboard and High Contrast. Just click Start On-Screen Keyboard or Set up High Contrast and follow the prompts.



## ■ Configuring Desktop Settings



### THE BOTTOM LINE

Windows *desktop settings* is a broad term that refers to many different settings you can configure to personalize Windows, such as the Windows theme, the desktop background, mouse clicks and pointer speeds, gadgets, shortcuts, and more. All settings are customizable—choosing the right mix will make your Windows experience more enjoyable and more productive.

The Windows desktop is a flexible, configurable part of the Windows environment. You can grab the taskbar and move it to either side of the screen, to the top, or back to its default location at the bottom (the taskbar must be unlocked to move it—right-click the taskbar and, if Lock the taskbar is checked, select the box to deselect it). You can also choose which items appear in the notification area on the right side of the taskbar by configuring the taskbar Properties dialog box. To access this dialog box, right-click the taskbar and select Properties.

### CERTIFICATION READY

How are desktop settings configured?

1.2

New in Windows 7 is the ability to *pin* program shortcuts directly to the taskbar; when you pin a program, the icon for that program displays on the taskbar even when the program isn't running. This provides you with quick access to your frequently used programs. Shortcuts for Internet Explorer, Windows Explorer, and Windows Media Player appear there by default. You can unpin programs from the taskbar as well. You'll learn about shortcuts later in the lesson.

When you open a program in Windows 7, an icon for that program displays on the taskbar. To activate a program, just click its icon on the taskbar. When you right-click a program's icon on the taskbar, a menu appears above the icon that contains a list of recently used files (if the application has an associated file type). The menu is called a *Jump List*. If you have several programs open at once, you can press and hold the Alt key and then press the Tab key repeatedly to switch between windows and see *live previews* of the window for each open program (see Figure 2-16).

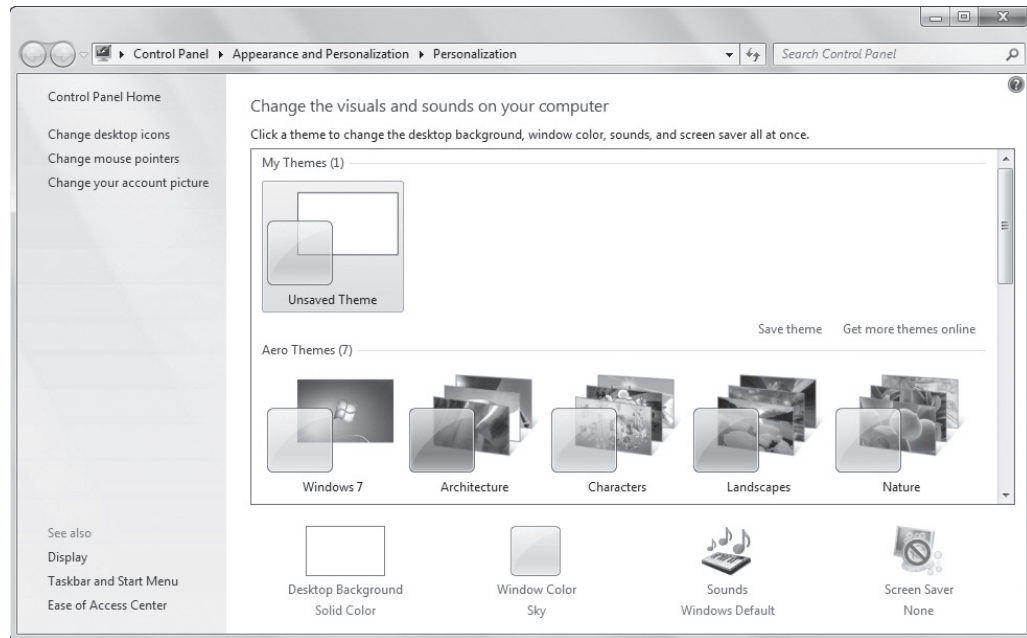
**Figure 2-16**

Viewing live previews of open programs with Alt+Tab



**Figure 2-17**

The Windows 7 Personalization window



Many Windows 7 desktop settings are available when you right-click a blank area of the desktop and choose Personalize. The Personalization window is shown in Figure 2-17.

The main part of the window displays various themes you can use. Although there are many themes to choose from, a few of the most commonly used themes include the following:

- **Windows 7:** This is the default theme in Windows 7, which is an Aero theme. The Aero interface includes translucent borders and animations. You'll learn about the Aero interface in detail in the next section.
- **Windows Classic:** This theme is the same user interface used in Windows 2000 and earlier versions. The Windows Classic theme disables some of the high-end graphic features to provide better performance.
- **Windows 7 Basic:** This theme looks like Aero but doesn't include the semitransparent effect that can tax some older video cards. Selecting Windows 7 Basic can make the operating system seem more responsive.

Just click the theme of your choice and see the changes take effect immediately.

You can also change the background of any theme. Just click Desktop Background. In the Desktop Background window, open the **Picture location** drop-down list, and then select a different background image, a solid color, or a picture from your digital picture collection.

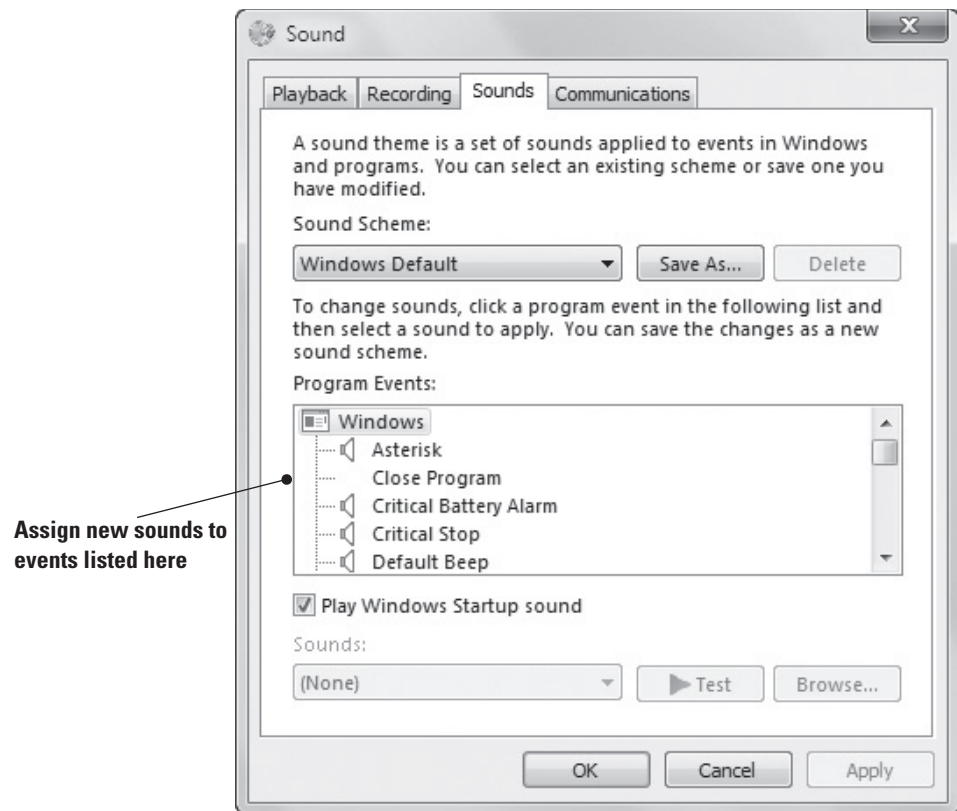
Clicking the Sounds link opens the Sound dialog box (see Figure 2-18). From here you can choose different sounds to accompany Windows events, such as when you connect a device or when you close Windows. The computer's sound volume must be set at an appropriate level to actually hear the sound.

Click the Screen Saver link to open the Screen Saver Settings dialog box. Then open the Screen saver drop-down list, select a screen saver, and click OK.

You'll learn about the Window Color link in the next section.

**Figure 2-18**

The Sound dialog box



## Exploring and Configuring the Aero Interface

The Aero interface was introduced in Windows Vista and has been improved in Windows 7 with new features such as Aero Shake, Aero Peek, and Aero Snap. You can tweak some Aero settings to improve computer performance and customize it for personal appeal.

### CERTIFICATION READY

What is the default theme in Windows 7?

1.2

The default theme in Windows is Windows 7, which is an **Aero** theme. Aero themes have a translucent “glass” design and provide your display with a three-dimensional look.

When you apply an Aero theme, window borders are partially transparent, allowing you to see what lies beneath them (see Figure 2-19). Aero themes also provide some animation within the interface. If you run the mouse over a button, the button glows. When you minimize a window, it fades and shrinks downward. The Aero theme is also customizable, as you’ll learn in the exercise that follows. First, let’s look at some of the Aero features.

**Aero Shake** allows you to quickly minimize all open windows except the active one. Point the mouse at the title bar of the active window, click the hold and left mouse button, and then quickly move the mouse back and forth to shake it. (If you’re new to Aero Shake, it can take a little practice to use it properly.)

To minimize all open windows at once, click the Show Desktop button. This button is the small shaded rectangle at the far right end of the taskbar. Pointing at it with your mouse

**Figure 2-19**

The translucent quality of an Aero theme



pointer displays a preview of the desktop. This is called peeking at the desktop and is part of the **Aero Peek** feature. If you click the Show Desktop button, all open windows are minimized.

Windows 7 Aero also includes **Aero Snap**, which allows you to quickly resize and arrange windows on the desktop. To use Aero Snap, drag the title bar of an open window to either side of the desktop to align it there, or drag it to the top of the desktop to maximize the window.



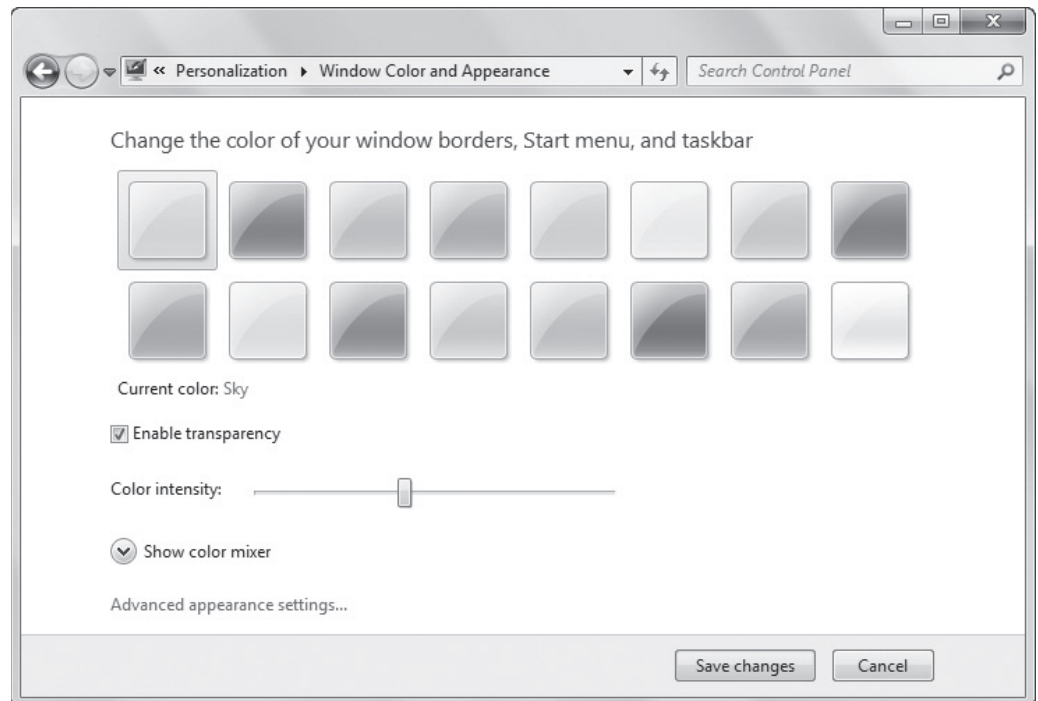
## CHANGE AERO SETTINGS

**GET READY.** You can modify many settings to affect Aero behavior. For example, to change the color of the Aero interface, perform the following steps:

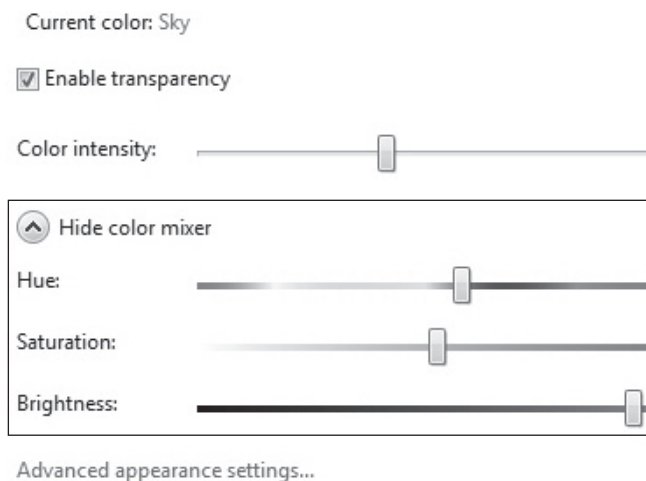
1. Right-click an empty part of the desktop, select **Personalize**, then click **Window Color**. The Window Color and Appearance window displays (see Figure 2-20).
2. Click a color box to change the color of Windows borders.
3. Uncheck the **Enable transparency** check box if you want to retain most of the Aero look and feel but you want to disable the semi-transparent effect.
4. Move the **Color intensity** slider to make the Windows border color more or less intense.
5. To create your own border color, click the **Show color mixer** arrow and then adjust the Hue, Saturation, and Brightness sliders (see Figure 2-21).
6. Click **Save changes**.

**Figure 2-20**

The Window Color and Appearance window

**Figure 2-21**

Adjusting the color mixer settings



## Configuring Display Settings

Windows 7 has several *display settings*, but you're likely to modify the resolution, color depth, and font size most often. You can modify each setting to suit a particular application.

### CERTIFICATION READY

What are some of the display-related settings you can adjust using the Screen Resolution window?

1.2

The Windows 7 Screen Resolution window allows you to configure many display-related settings. This is where you choose which monitor to use (if your computer is connected to two or more monitors) and whether to display content in a landscape or portrait orientation. You can also configure settings to connect a projector to your computer. Three other important display settings you might want to adjust for specific purposes are resolution, color depth, and font size.

Resolution refers to the number of pixels that create the “image,” that is, everything you see on the screen. **Resolution** has a horizontal value and a vertical value, such as 1200 x 768 or 1600 x 900. The Windows desktop expands itself to fit whichever resolution you select, so

**X** REF

If Windows 7 does not have the appropriate driver for the display, you might need to download and install a new driver to make the best use of your monitor. Lesson 5 covers drivers and how to install them.

you always have a full background. Similarly, the taskbar stretches across the bottom of the screen, regardless of the resolution you choose.

You might need to change a computer's screen resolution for a variety of reasons, such as when you're accommodating a visually impaired user or when you're using an external projector. Your computer's monitor has a minimum and a maximum resolution it can display, so Windows 7 gives you a range of resolutions to choose from.

**Color depth** refers to the number of bits that represents the color for each pixel on the screen. Color depths are generally 8 bits, 16 bits, 24 bits, and 32 bits; newer systems offer only 24 or 32 bits. The higher the color depth, the better photos and similar objects will look. You set color depth in the Advanced settings window of the Display control.

**TAKE NOTE \***

You seldom need to change resolution or color depth settings. Windows chooses the best settings for your monitor. The two primary monitor types are LCD and CRT.

Screen fonts are usually measured in dots per inch (dpi). You can enhance the appearance of your desktop by adjusting **font size** dpi to improve the readability of pixelated or illegible fonts.

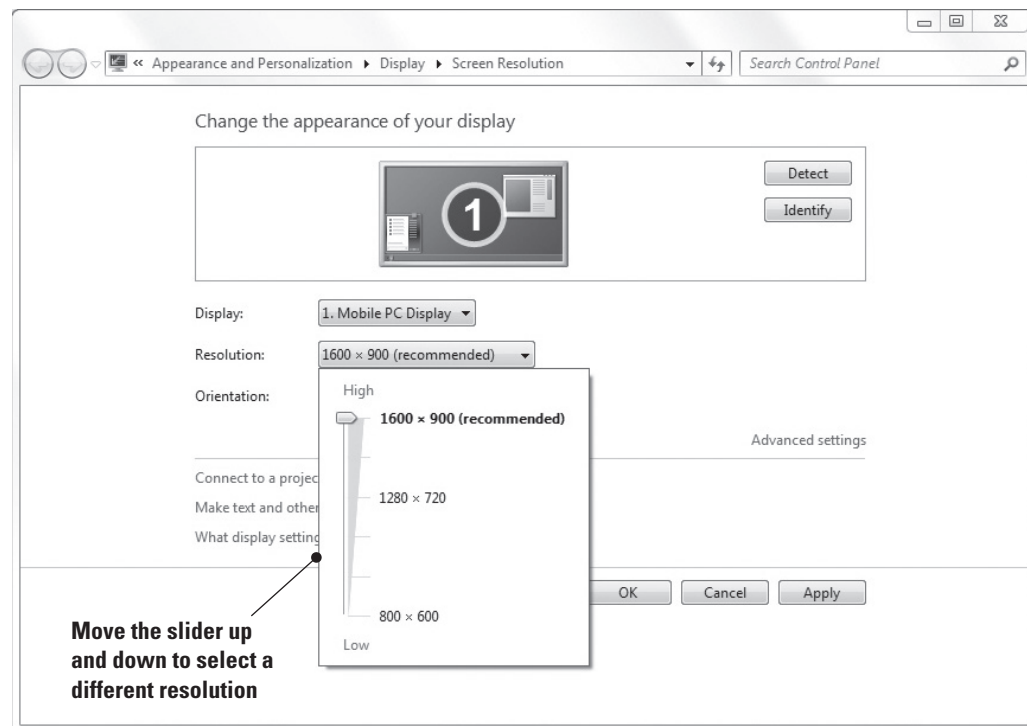
**ADJUST DISPLAY SETTINGS**

**GET READY.** To adjust display settings, perform the following steps:

1. To set screen resolution, right-click the desktop and select **Screen resolution**. Click the **Resolution** drop-down arrow and then drag the slider to change the resolution (see Figure 2-22).

**Figure 2-22**

Selecting a screen resolution

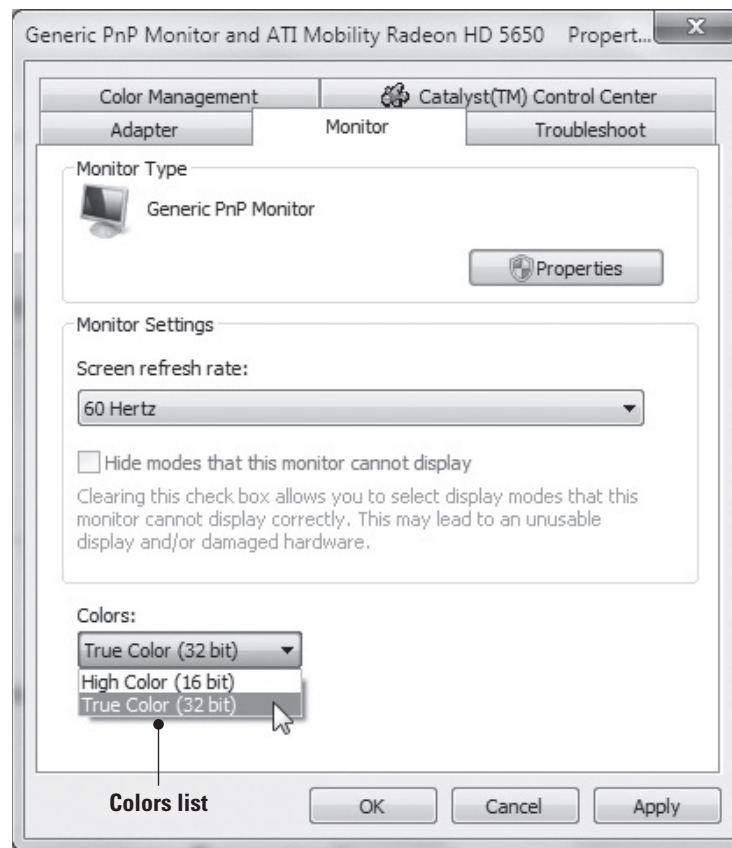




2. To adjust color depth, right-click the desktop, choose **Screen resolution**, and then click **Advanced settings**. Click the **Monitor** tab in the resulting properties window, click the **Colors** drop-down arrow, and then select the color depth of your choice (see Figure 2-23).

**Figure 2-23**

Selecting a color depth



3. To adjust screen font size, right-click the desktop, select **Personalize**, and then click **Display** in the left pane. The options are **Smaller**, **Medium**, and **Larger**.

Windows might prompt you to confirm your selections. The changes should take effect without requiring you to restart Windows.

## Creating and Managing Shortcuts

Shortcuts are icons you can click to start a program or go to a location without requiring any extra steps. Shortcuts save time because you don't have to use several keystrokes or click several menus or commands.

### CERTIFICATION READY

What is a shortcut?

1.2

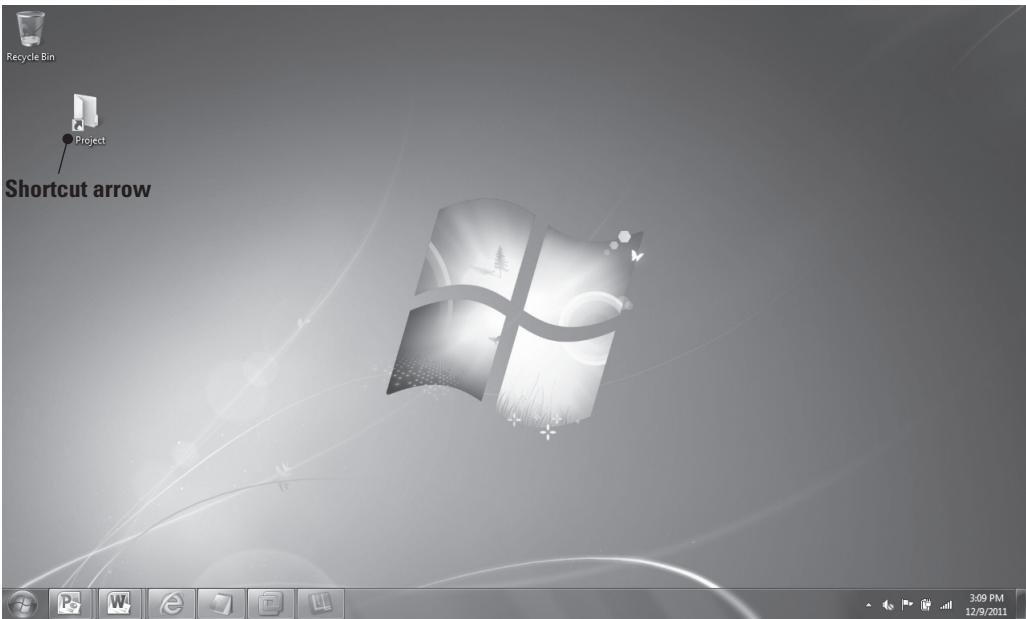
An icon is a small, visual symbol of a computer resource, such as a program, folder, file, or drive. To access an actual computer resource, click or double-click its icon. Some icons are located on the desktop, others are in the Start menu, and still others might appear in the list of files and folders in Windows Explorer.

A **shortcut** (see Figure 2-24) is an icon or link that gives you quick access to an original resource. The links you see in Control Panel are also considered shortcuts. Because a shortcut only points to a resource, deleting a shortcut does not delete the actual item. You can usually distinguish a shortcut icon from the original item it refers to because the shortcut has a small arrow in the shortcut icon's lower-left corner.



**Figure 2-24**

An example of a shortcut icon



If you regularly access a particular folder, you can create a shortcut to that folder on the desktop. Whenever you want to open that folder, double-click the icon instead of launching Windows Explorer and navigating to the folder to open it.



**CREATE AND DELETE A SHORTCUT**

**GET READY.** To create a folder shortcut on the desktop, perform the following steps:

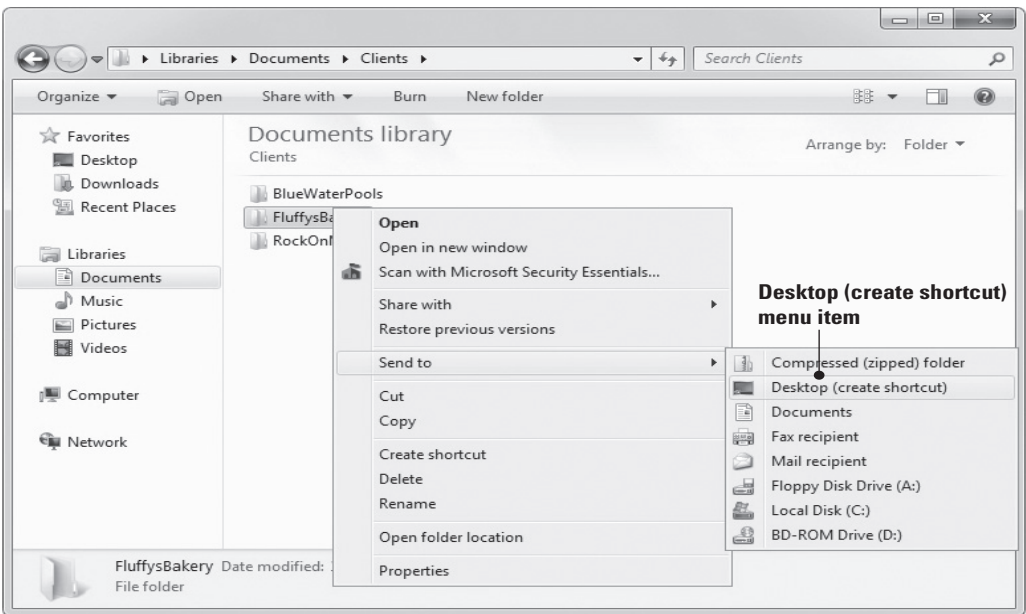
1. In Windows Explorer, point to the folder for which you want to create a shortcut.
2. Right-click the folder and choose **Send To > Desktop (create shortcut)** (see Figure 2-25). The shortcut now displays on your desktop.

To delete a shortcut icon:

1. Right-click it, choose **Delete**, and then click **OK**. The shortcut is removed and sent to the Recycle Bin.

**Figure 2-25**

Creating a shortcut on the desktop



## Configuring Gadgets

Gadgets are small, versatile applications that are run from the Windows 7 desktop. Gadgets are similar to mobile apps on a smartphone. A **gadget** is a small, single-purpose application that can be installed on the Windows 7 desktop. There are all kinds of gadgets available, such as calendars, clocks, games, newsfeeds, and weather reports and forecasts.

### CERTIFICATION READY

What is a gadget?

1.2

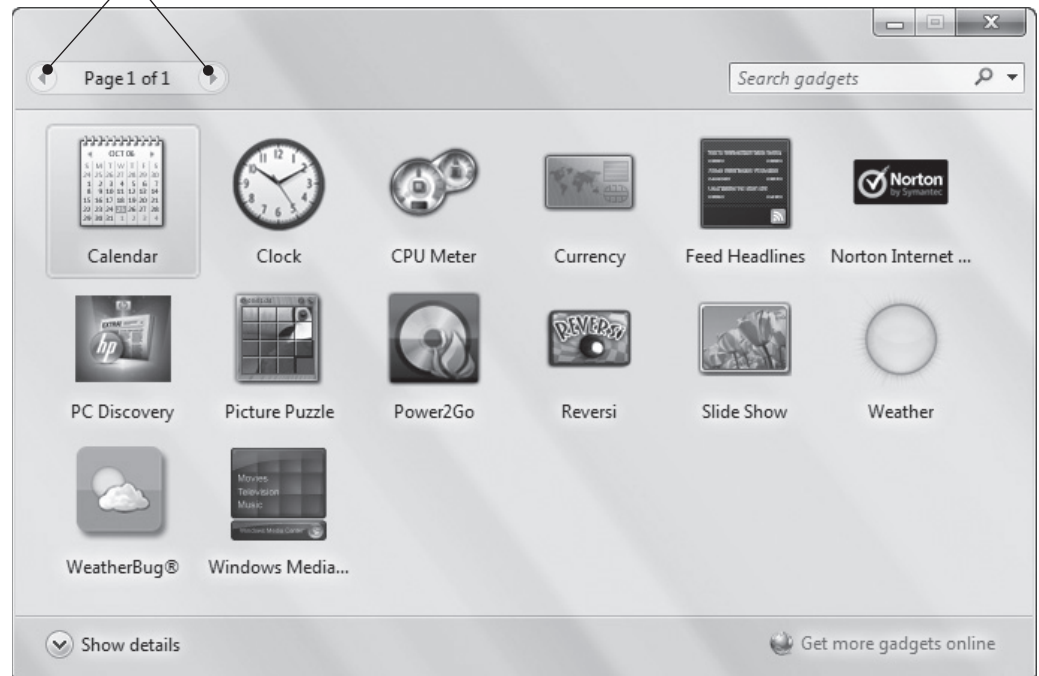
In Windows Vista, gadgets were displayed in the Windows Sidebar, which by default was located on the right side of the desktop. Windows 7 doesn't use the Windows Sidebar, so you can spread gadgets around your desktop wherever they're convenient to use. If open windows cover your gadgets, you can use Aero Peek to quickly reveal the desktop.

To open the Windows 7 gadget gallery, right-click an empty portion of the desktop and select Gadgets. The Windows 7 gadget gallery displays, as shown in Figure 2-26. The number of gadgets that install with Windows 7 is limited, but you can add gadgets to your gallery. Just click the *Get more gadgets online* link in the lower-right corner of the window. Your default Web browser opens to the Microsoft desktop gadgets Web site; the gadgets are free to download and install. Many gadgets are geared toward consumers, such as consumer shopping and auction sites and horoscope gadgets. However, some gadgets are useful in a business setting, such as the CPU meter, drive meter, and battery meter gadgets. As your gadget gallery grows, you can use the right and left arrows in the upper-left corner to scroll through available gadgets.

**Figure 2-26**

The Windows 7 gadget gallery

Click these arrows to scroll through available gadgets



### + MORE INFORMATION

For more information about Windows gadgets, visit <http://windows.microsoft.com/en-US/windows7/products/features/gadgets>



## ADD A GADGET TO YOUR DESKTOP

**GET READY.** To add a gadget to your desktop, perform the following steps.

1. Right-click a blank area of the desktop and select **Gadgets**.
2. Browse the gadget gallery. To get information about a particular gadget, click the gadget and then click the **Show details** link in the lower-left corner of the gallery.
3. Right-click a gadget of your choosing and click **Add** (see Figure 2-27). That gadget displays on your desktop. You can also drag-and-drop a gadget onto your desktop.

**Figure 2-27**

Adding a gadget to your desktop



4. To move a gadget or change its size, hover your mouse pointer over the gadget and then use the menu that displays next to the gadget (see Figure 2-28).

**Figure 2-28**

A menu displays alongside a gadget when you hover your mouse pointer over the gadget



To remove a gadget from the desktop (but leave it in the gallery for later use), click the X at the top of the menu next to the gadget.

## Configuring Profiles

All of a user's personal preferences—from theme choice to screen saver to shortcuts—are saved in a user profile. Windows relates a user's preferences to the user account. Each time a user logs on to Windows, the user's profile is loaded.

Now that you've learned how to change all kinds of desktop settings, create shortcuts, and add gadgets, you might wonder how Windows remembers all of those settings. Windows uses user profiles to do so. Your **user profile** contains your desktop settings (your theme, desktop background, screen saver, and so on) and other personal preferences. The purpose of a user profile is to maintain your preferences so they appear each time you log on to Windows.

**CERTIFICATION READY**  
What is a user profile?  
1.2

User profiles can be local or roaming. A local profile is available only on the computer on which it was created. A roaming profile enables a user to use any computer to connect to a Windows domain and access her profile. (Remember, a domain is a collection of user and computer accounts that enable an administrator to manage and apply security to them as a group.) User preferences load upon domain log-on, giving the user a consistent desktop experience. A user with a lot of data and many personalized settings can experience a delay while the roaming profile loads.

In a domain, a server called a domain controller authenticates users at log on. **Authentication** means the domain controller checks the user's credentials, which are generally a user name and password. The user name entered must match the password on file. The domain controller also checks the permissions a user has to resources on the network. The credentials are saved to the computer's hard disk—referred to as **cached credentials**—which allow the user to access resources when a domain controller is unavailable. A domain controller might be unavailable because the server is down or because a user is attempting to access the network from a remote location.

Don't confuse a user profile with a user account. A user account is used to log on to Windows. Every user account has a subfolder in the C:\Users folder and each account has at least one user profile associated with it.

## ■ Understanding Virtualized Clients



### THE BOTTOM LINE

**Virtualization** is a technology that creates an abstract version of a complete operating environment (including a processor, memory, storage, network links, a display, and so forth) entirely in software. Because the resulting runtime environment is completely software-based, the software produces what's called a **virtual computer** or a **virtual machine (VM)**. Virtualization is a term used to describe the work involved in setting up all the data structures necessary to represent and run a VM on a physical computer of some kind.

In Windows, a **virtualized client** is a VM that's set up specifically to run some kind of application that typically runs in an older version of Windows (such as Windows 2000 or Windows XP). On a Windows 7 PC, a virtualized client runs as a VM inside what's called a **guest operating system** or **guest OS** within a virtual runtime environment (such as Windows Virtual PC or VMware Workstation).

Virtualization becomes necessary when users need to run applications that won't work on modern Windows operating systems. By running an older version of Windows (such as Windows XP) in a VM on Windows 7, users can continue to work with software that's incompatible with the host OS inside a compatible guest OS.

## Understanding Windows XP Mode

As presented in the lesson case for Interstate Snacks at the outset of this chapter, users need access to a legacy program that doesn't work in Windows 7. Fortunately, it does work in Windows XP and that builds an ironclad case to make Windows XP Mode available to the Interstate Snacks user community. Although Windows Virtual PC runs on all Windows 7 versions, Windows XP Mode works only on Windows 7 Professional, Enterprise, or Ultimate. Be sure to factor that into your OS selection and deployment plans!

**CERTIFICATION READY**

What is Windows XP Mode?

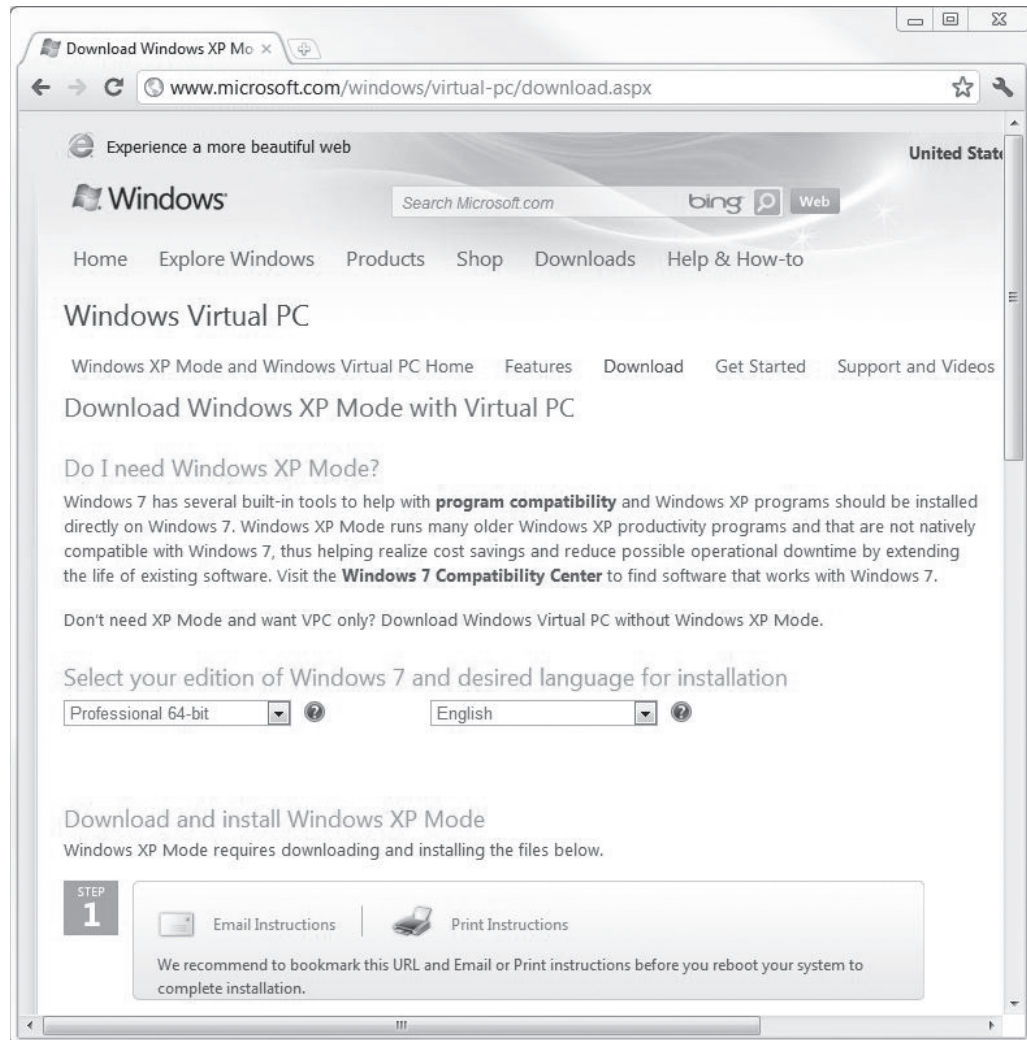
2.4

**Windows XP Mode** is an add-on that Microsoft makes available as an extension to Windows Virtual PC. When you install this virtual machine environment on a Windows 7 computer, users can run applications inside the VM that won't work on Windows 7.

Visit <http://www.microsoft.com/windows/virtual-pc/download.aspx> to grab a copy for your users' PCs. Figure 2-29 shows the download page with a download for 64-bit Windows 7 Professional selected. The download confers a free Windows XP Mode license to those who put it to work, which helps companies avoid license infringement trouble with Microsoft.

**Figure 2-29**

Selecting the Windows XP Mode download to match a Windows 7 version



Once Windows XP Mode is installed, you must then install the applications that are not compatible with Windows 7 into the Windows XP VM that's created. Users can launch this VM directly from their desktops or menus to access the applications they need.

**INSTALL WINDOWS XP MODE**

**GET READY.** Visit the Microsoft Web page where you'll download the files you need to install Windows XP mode on your user machines. To install Windows XP Mode, perform the following steps:

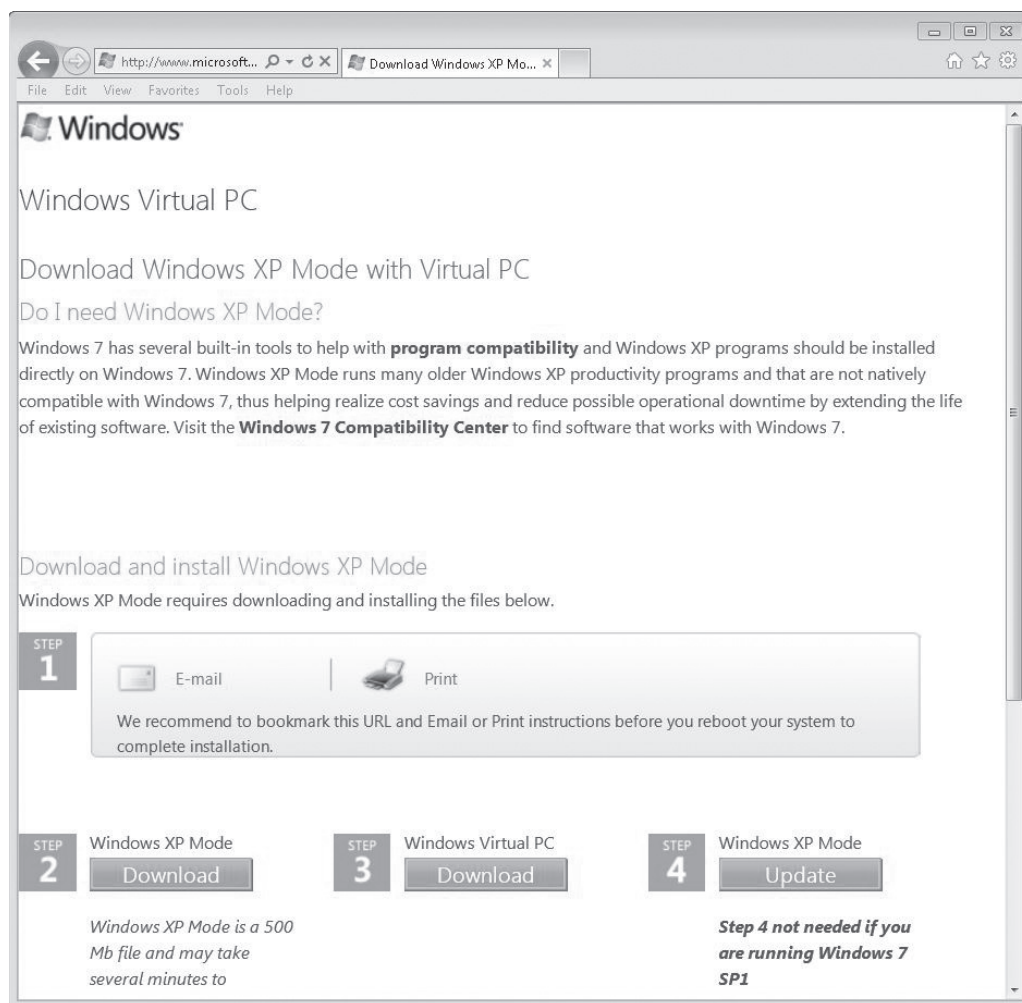
1. Check the system requirements prior to downloading Windows XP Mode.
2. Select the appropriate Windows version and language for your target PC or PCs. As shown in Figure 2-29, our example is 64-bit Windows 7 Professional and English.



- On the Web page shown in Figure 2-30, for **Step 2**, click **Download**. Once Windows validation completes successfully, Internet Explorer requests permission to download a file named **WindowsXPMode\_en-us.exe**. Grant permission and run the file. This sets the stage for WindowsVirtual PC to be installed in a subsequent step.

**Figure 2-30**

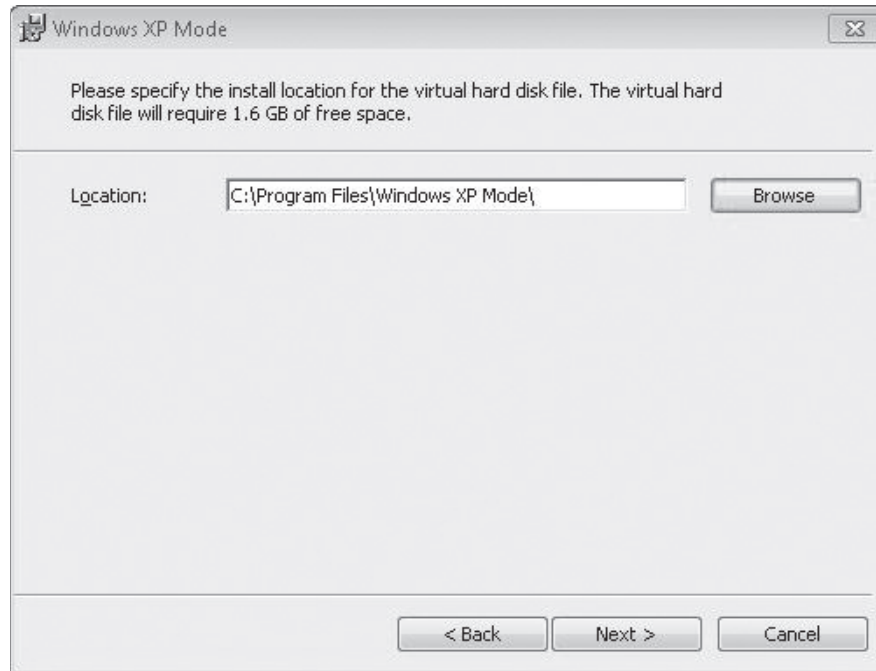
Once you download the XP Mode file, you'll step through its installation process



- In stepping through the Windows XP Mode install, you'll work through a Setup program. You'll start by clicking **Next** to start the installation, designating a target directory (the Program Files default target is usually suitable, as shown in Figure 2-31), waiting through a virtual hard disk install, and then clicking **Finish** to complete the XP Mode setup.
- With XP Mode installed, you must return to the Web page and move on to Step 3. This is where you download and install Windows Virtual PC. When you click the **Download** button for Step 3, you grant permission to download and run the file named Windows6.1-KB9598559-x64-RefreshPkg.msu. (Refer to Figure 2-30 if necessary).
- When you execute the Windows Virtual PC file, you run a standalone Windows Update file. Once it gets going, it looks like any other ordinary Windows Update file. And, like many other such updates, it forces a restart of your system when it completes; it also goes through an update configuration before and after the reboot.
- When the PC reboots, click **Start** and in the **Search programs and files** search box, type **XP**. In the results list displayed, click the Windows XP Mode entry. This completes the Windows XP Mode installation and initialization process and usually takes

**Figure 2-31**

Designating a target directory while installing Windows XP Mode software



at least several minutes to complete. During this process, you'll need to agree to license terms and define a login password for the default xpmuser account that the program creates to finalize installation.

Now XP Mode is up and running and available as an entry named Windows XP Mode through the Virtual PC element in the Start Menu program listings. Before users can take advantage of this environment, you must complete your normal installation processes—which usually means installing anti-malware applications, standard programs, and of course the legacy applications that don't work under Windows 7.

Windows XP Mode makes it easy for users to run legacy applications, even on newer computers and inside otherwise incompatible operating systems. Programs installed inside the Windows XP Mode environment also show up in the standard Windows 7 Program menus, so users can access them without first launching the XP Mode Virtual Machine. Shortcuts to these programs can even be dropped on the desktop, if that's how users like to run things.

#### **+ MORE INFORMATION**

For more information about Windows XP Mode, visit <http://windows.microsoft.com/en-us/windows7/products/features/windows-xp-mode>

## ■ Understanding Application Virtualization

### ↓ THE BOTTOM LINE

**Application virtualization** adds the ability to install and manage legacy applications and virtual machines centrally. This capability sometimes relies on additional Microsoft technologies, including a **virtual desktop infrastructure (VDI)** that runs a desktop OS within a virtual machine (VM) running on a server.



Microsoft and several third parties support remote access tools whereby users load and display carefully constructed VMs on their desktops, and these VMs provide them with remote access to tools that are located on servers that might be located off site. This approach simplifies the management and deployment of legacy applications for IT professionals, but still makes them readily accessible to end users, on and off corporate networks.

Microsoft's Remote Desktop Services (RDS) permit users to access and run VMs in a variety of situations. This includes obtaining access to remote servers designed to create and deliver VMs to users on corporate networks, as needed. These same technologies can also provide remote access to mobile workers in the field or telecommuters in their homes. You will learn more about RDS in Lesson 3.

## Understanding Med-V

**Microsoft Enterprise Desktop Virtualization** (aka **Med-V** or **MED-V**) is the part of the Microsoft Desktop Optimization Pack (MDOP), which delivers legacy applications to Windows 7 users in the form of Windows-XP based virtual machines. It provides a mechanism for providing uninterrupted access to legacy applications while Windows 7 upgrades and transitions are underway.

Med-V consists of several client components that must be installed on Windows 7 client computers. These include the Med-V Management Server that communicates with a central server to obtain information about and access to pre-defined VMs for use with Med-V. Clients also have installed a specific Med-V Client program and a Med-V Management Console to handle and run Med-V VMs.

### CERTIFICATION READY

What is Med-V?

3.5

Med-V also works with Windows Virtual PC, and is often used to deploy that software in large organizations. An important advantage of Med-V is that it provides centralized management and uses policies to provide and deliver virtual images to client machines. Med-V also supports Windows XP Mode. In fact, Windows XP Mode lets administrators set up icons for applications inside Windows XP Mode that launch from the Windows 7 desktop just like native application, although they run inside the Windows XP VM.

Users access special pre-defined virtual hard disks (VHDs) to run Med-V VMs. These are made accessible through Med-V Workspaces and specific downloads. The Med-V Management Console is what enables **Quick Start definitions** for Med-V VMs (and the programs they contain), through a special Quick Start Group Policy file.

From an end-user perspective, these elements of Med-V infrastructure are unobtrusive and almost entirely invisible. Though system and desktop administrators have to set up and configure this infrastructure, Med-V creates an end-user experience that is best described as "click and go," even though it uses the basic elements of Windows XP Mode in a centrally controlled and managed fashion.

## Understanding VDI and App-V

Microsoft's Virtual Desktop Infrastructure (VDI) depends on a special, licensed access right that permits users to access a virtual machine running a Windows client. This technology permits users to access secure, centrally-managed desktops running in a datacenter.

Microsoft VDI provides unified management of centralized desktops and corporate data using Microsoft System Center server technology. This approach permits IT to extend existing management tools and processes to virtual desktop environments. The goals are to reduce management overhead and enable rapid deployment and quick patching.

This is possible because VDI relies on desktop images that are created, managed, and maintained centrally. System Center Configuration Manager can orchestrate rapid delivery of operating systems and applications as well as driver and software updates for physical and virtual desktop platforms. It even works with self-service applications packaged using Microsoft App-V technologies.

#### CERTIFICATION READY

What is the purpose of Microsoft VDI and App-V?

3.5

App-V extends virtualized applications from central servers to authorized users on any authorized PCs without requiring application installs. Users simply request access to an application; virtualization technology running in the background brokers a connection to a suitable server and delivers direct access to the application with minimal delay. The environment preserves virtual applications and user settings whether users are active online or inactive and offline. With App-V, users need only to click to launch applications; they don't need to wait for installations or reboots. Updates are automatically applied and immediately available the next time a program is launched.

App-V also helps to minimize conflicts between applications because they run in separate runtime containers that do not interfere with one another. This reduces application compatibility testing requirements and can further speed deployment times. App-V is designed to make applications available anywhere, anytime to users as long as they have Internet access available.

#### + MORE INFORMATION

For more information about desktop virtualization and VDI, visit <http://www.microsoft.com/virtualization/en-us/products-desktop.aspx> and <http://technet.microsoft.com/en-us/edge/microsoft-virtual-desktop-infrastructure-vdi-explained.aspx>

## SKILL SUMMARY

### IN THIS LESSON YOU LEARNED:

- The two primary types of user accounts in Windows 7 are Standard user and Administrator. You generally use a standard account for everyday tasks and an administrative-level account for troubleshooting, installation, and similar tasks that require more rights and permissions.
- User Account Control (UAC) is a security feature in Windows Vista and Windows 7 that helps protect a computer from unauthorized changes. When a user, malicious software, or even an attacker attempts to modify certain system settings, a dialog box displays that requires confirmation or an administrative-level password to continue.
- There are four levels of UAC control, which result in different types of alerts or notifications to the user. Each user can choose the level that works best for them, although the default settings are highly recommended.
- The Control Panel is a utility that allows you to configure operating system features, set up hardware, install and uninstall software, create and modify users, and perform system maintenance.
- The Ease of Access Center provides many accessibility features to help visually and hearing impaired people use Windows more easily and efficiently. The primary tools include Magnifier, Narrator, On-Screen Keyboard, and High Contrast.

- Windows desktop settings is a broad term that refers to many different settings you can configure to personalize Windows, such as the Windows theme, desktop background, mouse click and pointer speed, gadgets, shortcuts, and more. All settings are customizable, and choosing the right mix will make your Windows experience more enjoyable and more productive.
- Windows XP Mode is a free download available to users of Windows 7 Professional, Enterprise, and Ultimate versions. It permits administrators to create and package Windows XP-based VMs, to support legacy applications that don't work on Windows 7. Windows XP Mode programs are available directly through the Windows 7 Start menu, and are easy and convenient for users to launch and run.
- Application Virtualization (App-V) permits users to launch and run applications on their desktops without installing or rebooting their machines. Microsoft's App-V technology makes instant use available through System Center and special centralized configuration and management utilities. A virtual desktop infrastructure (VDI) makes delivery of VMs and virtual applications possible.
- Microsoft Enterprise Desktop-Virtualization (Med-V) provides another way to deliver legacy applications to end users, on centrally configured and managed VMs. This allows for administrators who need only manage master copies in the data center, while users put copies of the master to work on their desktops.

## ■ Knowledge Assessment

### Fill in the Blank

*Complete the following sentences by writing the correct word or words in the blanks provided.*

1. A \_\_\_\_\_ is a collection of information that defines the actions you can take on a computer and which files and folders you can access.
2. The \_\_\_\_\_ account type is best for everyday use.
3. The \_\_\_\_\_ interface, which is the basis for the default theme in Windows 7, includes translucent borders and animations.
4. To configure accessibility options, open the \_\_\_\_\_.
5. To minimize all open windows at once, click the \_\_\_\_\_ button.
6. \_\_\_\_\_ includes several applets, including System and Security, Programs, and User Accounts and Family Safety.
7. Use \_\_\_\_\_ to troubleshoot and resolve computer problems, and to keep your system running optimally.
8. The Windows 7 \_\_\_\_\_ window allows you to configure several display-related settings, such as choice of monitors or content orientation (landscape or portrait).
9. \_\_\_\_\_ is a free download for Windows 7 Professional, Enterprise, and Ultimate versions that supports legacy applications inside a virtual Windows XP machine running on Windows 7.
10. \_\_\_\_\_ allows applications to run without being installed on desktop systems.

## Multiple Choice

*Circle the letter that corresponds to the best answer.*

1. Which of the following is *not* an account type in Windows 7?
  - a. Guest
  - b. Limited user
  - c. Standard user
  - d. Administrator
2. Which of the following can you perform in the Manage Accounts window? (Choose all that apply.)
  - a. Change the account type
  - b. Create a password
  - c. Delete the account
  - d. Set up Parental Controls
3. Which of the following actions is most likely to trigger a User Account Control dialog box?
  - a. Uninstalling a program
  - b. Creating a shortcut
  - c. Changing resolution
  - d. Adding a gadget
4. Where can you directly access Event Viewer?
  - a. Gadgets window
  - b. Programs applet in Control Panel
  - c. Administrative Tools
  - d. User Account Control dialog box
5. Which of the following is *not* a UAC notification level?
  - a. Always notify me
  - b. Notify me only when users try to access my files
  - c. Notify me only when programs try to make changes to my computer
  - d. Never notify me of installations or changes
6. Which Aero feature allows you to quickly minimize all open windows except the active one?
  - a. Shake
  - b. Snap
  - c. Peek
  - d. Show Desktop
7. Which of the following settings is *not* configurable from the Screen Resolution window?
  - a. Orientation
  - b. Font size
  - c. Display
  - d. Windows theme
8. Which of the following allows you to manage programs that run when Windows starts or when you log on?
  - a. Task Scheduler
  - b. Performance Monitor
  - c. Programs applet in Control Panel
  - d. System Configuration
9. Which versions of Windows 7 support Windows XP Mode? (Choose all that apply.)
  - a. Starter
  - b. Home Premium
  - c. Professional
  - d. Ultimate
  - e. Enterprise

10. Which of the following correctly explains the abbreviation VHD?
- a. Variable Hex Determinant
  - b. Virtual Home Directory
  - c. Virtual Hard Disk
  - d. Virtual Hard Drive

### True / False

*Circle T if the statement is true or F if the statement is false.*

- |   |   |   |
|---|---|---|
| T | F | 1. A User Account Control dialog box displays when you open your data files.    |
| T | F | 2. You cannot change the desktop resolution setting because it's a fixed value. |
| T | F | 3. Deleting a shortcut does not delete the resource it represents.              |
| T | F | 4. A user account and a user profile are the same thing.                        |
| T | F | 5. Med-V delivers centrally managed virtual machines to authorized end users.   |

## ■ Competency Assessment

### Scenario 2-1: Getting Administrative-Level Privileges

As an IT technician, you need to perform some maintenance tasks on an employee's computer that will require elevated privileges. When you go to the Manage Accounts window in Control Panel on that employee's computer, you see only the employee's standard user account. What do you do to be able to log on as a user with administrative-level privileges?

### Scenario 2-2: Configuring Accessibility Features

Alexandra, an employee at your company, is visually impaired. Which features can you configure in Windows 7 to help her do her work more efficiently?

## ■ Proficiency Assessment

### Scenario 2-3: Running a Legacy Application

Oscar is the warehouse manager for The OEM Connection, an auto parts business. Although the business standardized on Windows 7 Professional, Oscar needs to run a legacy parts lookup program that does not run in Windows 7. You provide technical support to The OEM Connection. What can you do to help Oscar?

### Scenario 2-4: Creating a Better User Experience

Oscar at The OEM Connection asks you to help him speed up his computer, which now runs Windows 7 Professional. He doesn't care about all of the "zippy, new" features in the Windows 7 Aero interface—he just wants the computer to run a bit faster and be more responsive. He would also like to be able to quickly launch Microsoft Excel each time he logs on to his computer, and he does not want the Windows Media Player to be present on the taskbar. How do you meet Oscar's requests?